



DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

NOTICE OF ACCEPTANCE (NOA)

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION

11805 SW 26 Street, Room 208
Miami, Florida 33175-2474
T (786) 315-2590 F (786) 315-2599

www.miamidade.gov/economy

NCFI Polyurethanes
1515 Carter Street (P.O. Box 1528)
Mount Airy, NC 27030

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER-Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code. This product is approved as described herein, and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone.

DESCRIPTION: InsulStar® Spray Polyurethane Foam Adhesive

APPROVAL DOCUMENT: Engineering Report & Drawings titled "InsulStar® Spray Polyurethane Foam Adhesive, sheets 1 through 6 of 6, dated 06/26/2012, prepared by C-Buck, Inc., signed and sealed by James L. Buckner, P.E., bearing the Miami-Dade County Product Control approval stamp with the Notice of Acceptance number and approval date by the Miami-Dade County Product Control Section.

MISSILE IMPACT RATING: None

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official. This NOA consists of this page 1 and evidence page E-1, as well as approval document mentioned above. The submitted documentation was reviewed by **Carlos M. Utrera, P.E.**



Signature
01/23/2013

NOA No. 12-0810.09
Expiration Date: January 31, 2018
Approval Date: January 31, 2013
Page 1

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. Engineering Report & Drawings titled "InsulStar® Spray Polyurethane Foam Adhesive, sheets 1 through 6 of 6, dated 06/26/2012, prepared by C-Buck, Inc., signed and sealed by James L. Buckner, P.E.

B. TESTS

	<u>Test Report No.</u>	<u>Standard</u>	<u>Date</u>	<u>Signature</u>
1.	CTLA 2066W	TAS 202 & 203	08/29/11	Ramesh Patel, P.E.
2.	NCF-021-02-01	ASTM D2842	09/17/07	Donald Portfolio, P.E.
3.	NCF-021-02-01	ASTM D1623	09/17/07	Donald Portfolio, P.E.
4.	NCF-021-02-01	ASTM E96	09/17/07	Donald Portfolio, P.E.
5.	NCF-021-02-01	ASTM D1621	09/17/07	Donald Portfolio, P.E.
6.	09-012-13353-1	ASTM D6226	10/22/09	Bradley Smith
7.	10-06-M0068	ASTM D2126	05/19/10	Franz Bauer
8.	CTLA2066W-2	ASTM C273	10/24/11	Ramesh Patel, P.E.
9.	RJ1744-1	ASTM E84	02/03/12	Chris Bowness, P.E.
10.	NCF-033-02-01	ASTM D 1929	10/04/11	Duc T. Nguyen, P.E.

C. CALCULATIONS:

1. Design pressure calculations, dated 06/26/2012, prepared by C-Buck, Inc., signed and sealed by James L. Buckner, P.E.

D. QUALITY ASSURANCE


1. Miami-Dade Department of Regulatory and Economic Resources (RER)

E. MATERIAL CERTIFICATIONS

1. Product durability/performance analysis on InsulStar® Spray Polyurethane Foam Adhesive per ASTM D1623, prepared by C-Buck, Inc., Report No. 11-152-LTP1, dated 06/26/2012, signed and sealed by James L. Buckner, P.E.

F. STATEMENTS

1. Statement letter of code conformance to FBC 2010, issued by C-Buck, Inc., dated 01/23/2013, signed and sealed by James L. Buckner, P.E.
2. Statement letter of no financial interest issued by C-Buck, Inc., dated 01/23/2013, signed and sealed by James L. Buckner, P.E.


01/23/2013

Carlos M. Utrera, P.E.
Product Control Examiner
NOA No. 12-0810.09

Expiration Date: January 31, 2018
Approval Date: January 31, 2013

Engineering Report & Drawings
Of
NCFI Polyurethanes
InsulStar® Spray Polyurethane Foam Adhesive

For
Miami-Dade Notice of Acceptance (NOA)

Category: Cladding
Sub - Category: Wood Connectors
Material: Polyurethane

Product: InsulStar®
Product Description: Spray Polyurethane Foam Adhesive
Application Use: Supplemental Plywood Deck Attachment

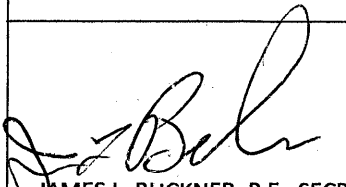

Prepared by:
James L. Buckner, P.E., SECB
Florida Professional Engineer # 31242
Project Manager: Youry Demosthenes
Report No.: 11-152-InsulStar-SPFA-ENG REP
Date: 6 / 26 / 12

Contents:

Cover Page	Page 1
Evaluation Report	Pages 2 – 6

Approved as complying with the
Florida Building Code
Date 01/31/2013
NOA# 12-0810-09
Miami Dade Product Control

By [Signature]

 JAMES L. BUCKNER, P.E., SECB FLORIDA P.E. #31242 <u>8/6/12</u>	NCFI InsulStar® Spray Polyurethane Foam Adhesive ENGINEERING REPORT		
	 CBUCK Engineering COA #8064 CBUCK, Inc. 1399 N. Killian Dr., Ste 4 W. Palm Beach, FL 33403 (561) 491-9927	MANUFACTURER: NCFI Polyurethanes 1515 Carter Street Mount Airy, NC 27030	DATE: 6 / 26 / 12 PAGE #: 1 OF 6 PROJECT #: 11-152 DRAWN BY: YD REVISIONS:

Product:

Manufacturer: NCFI Polyurethanes
Product Names: InsulStar® Spray Polyurethane Foam Adhesive
Category: Cladding
Subcategory: Wood Connectors
Material: Polyurethane

Evaluation Scope:**Evaluation Criteria:**

Florida Building Code (FBC) 2010

Code Section: High Velocity Hurricane Zone (HVHZ)

Miami-Dade County Building and Neighborhood Compliance Department Basic Requirement Checklist

Properties Evaluated:**Wind Resistance Properties**

Uniform Static Air Pressure (Structural & Negative Load only)

Cyclic Wind Pressure Loading

Physical Properties

Water Absorption

Dimensional Stability

Water Vapor Permeability

Compressive Strength

Tensile strength

Shear Strength

Closed Cell Content

Surface Burning Characteristics

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Limits of Evaluation:

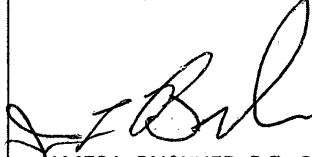

This product is limited to compliance with the evaluation criteria and properties evaluated as listed above.

Evaluated Uses:**Structural:**

The InsulStar® Spray Polyurethane Foam Adhesive as evaluated in this report may be used for supplemental attachment of roof plywood deck to rafters/truss top chords (dimensional lumber). This product may be used for supplemental wind resistance in new construction or for enhancing the wind uplift resistance on existing structures.

Product Description:**General:**

InsulStar® is a two component, one to one by volume, self-adhering, spray applied, closed-cell polyurethane foam adhesive. InsulStar® Spray Polyurethane Foam Adhesive is produced in the field by combining an isocyanate (component 11-016A) and a resin (component 11-016R). This spray foam adhesive provides wind uplift resistance when applied directly to the junction of the roof plywood deck and the roof rafter/truss top chords. InsulStar® Spray Polyurethane Foam Adhesive fillet is applied to both sides of the roof rafter/truss top chords.

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			DRAWN BY: YD
		REVISIONS:	

Evaluated Components to be Adhered:**Roof Deck:**

- Type: - Per FBC Section 2322.2
- 15/32" Minimum Thickness, on Existing Buildings.

Rafter/Truss Top Chord:

- Function: Typically Roof Rafter or Wood Truss Top Chord
Type: Dimensional Lumber
Specific Gravity: 0.42 Minimum
Size: Nominal 2" x 4" Minimum
Spacing: 24 in. o.c. (As Tested and Evaluated)

(Design of components is outside the scope of this evaluation)

Product Assembly Performance:**Wind Resistance Properties****Allowable Design Uplift Resistance:**

- Resistance - 142.5 PSF
Standard: TAS 202 - 94
Based on Rafters/Roof Truss Top Chords Spacing of 24" o.c.

Cyclic Wind Loading:

- Results: Passed
Standard: TAS 203 - 94

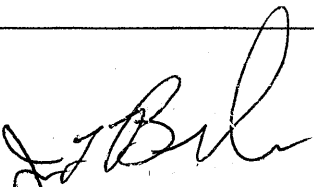
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Miami Dade Product Control

By 


Physical Properties:

Properties:	Standards	Value
Water Absorption (% by volume)	ASTM D2842	0.97 %
Dimensional Stability (% by volume)		
At 158° F, ambient R.H. 28 days	ASTM D2126	0.3 %
Water Vapor Permeability (@ 1" SPF)	ASTM E96	1.3 perm-inch
Compressive Strength	ASTM D1621	20.1 psi
Tensile Strength	ASTM D1623	53.7 psi
Shear Strength	ASTM C273	25.46 psi
Closed Cell Content	ASTM C6226	96.3%
Flame Spread Index	ASTM E84	25
Smoke Developed Index	ASTM E84	350
Self-Ignition Temperature	ASTM D1929	915° F

Note: The Physical properties listed above are presented as typical average values as determined by accepted ASTM test methods and are subject to normal manufacturing variation.


JAMES L. BUCKNER, P.E., SECB
FLORIDA P.E. #31242
8/6/12

**NCFI InsulStar® Spray Polyurethane Foam Adhesive
ENGINEERING REPORT**

 **CBUCK Engineering**
COA #8064
CBUCK, Inc.
1399 N. Killian Dr., Ste 4
W. Palm Beach, FL 33403
(561) 491-9927

MANUFACTURER:

NCFI Polyurethanes
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DATE: 6 / 26 / 12

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DRAWN BY: YD

REVISIONS:

General Installation Method:

- Surface Preparation:

All surfaces intended to be sprayed with NCFI's InsulStar® Spray Polyurethane Foam Adhesive must be dry, clean, and secure. Remove sawdust and other debris from areas intended to be sprayed by blowing with compressed air or vacuuming with a shop vacuum. Check surfaces with NCFI MDP strips to verify dryness. All metals to which adhesive is to be applied must be free of oil, grease, rust, etc. Primers should be used where necessary.

- Application Method:

Apply InsulStar® Spray Polyurethane Foam Adhesive using a "picture framing" technique. Foam must cover at least 3-inches of the rafter member and 3-inches of the roof deck. The resulting triangular cant, at least 3-inches high and 3-inches wide, will cover the joint between the rafter member and the underside of the roof deck. Spray foam adhesive shall be applied in consecutive layers not to exceed 2 inches per pass. Allow foam to fully expand and cool for a period of 10 minutes between each layer.

- Install the system in compliance with the evaluated installation method(s). The installation method(s) described herein have been evaluated to address the scope of the evaluation. Refer to manufacturer's installation instructions as a supplemental guide for spray foam application.

(Refer to installation method on Page 6 of this evaluation report.)

Limitations of Use:

InsulStar® Spray Polyurethane Foam Adhesive shall be installed by a NCFI Polyurethanes qualified spray foam applicator trained in the processing and application of SPF systems as well as the plural component polyurethane dispensing equipment.

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Fire Classification is not part of this acceptance. Refer to a current Approved Roofing Materials Directory for fire ratings of this product.

This product may be used for supplemental attachment of roof plywood deck to rafters/truss top chords

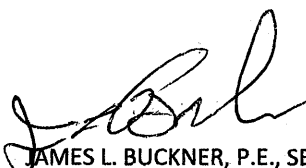

This product may be used for code plus wind resistance in new construction or for enhancing the wind uplift resistance on existing structures.

Code Compliance:

The product assembly described herein has demonstrated compliance with the Florida Building Code 2007, HVHZ, Standards TAS 202-94 and TAS 203-94.

Identification:

Each individual unit shall bear a permanent label with the manufacture's name or logo, city, state and following statement: Miami-Dade County Product control Approved", unless otherwise noted.

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		1515 Carter Street	PROJECT #: 11-152
		Mount Airy, NC 27030	DRAWN BY: YD
		REVISIONS:	

Referenced Data:

Test Report on:

- TAS 202-94

Criteria for Testing Impact and Non-impact Resistant Building Envelope Components Using Uniform Static Air Pressure

By: Certified Testing Laboratories

Report No.: CTLA2066W, Dated: 8/29/11, Signed & Sealed 8/29/09 by Ramesh C. Patel, P.E.

- TAS 203-94

Criteria for Testing Products Subject to Cyclic Wind Pressure Loading

By: Certified Testing Laboratories

Report No.: CTLA2066W, Dated: 8/24/09, Signed & Sealed 8/29/09 by Ramesh C. Patel, P.E.

- ASTM D2842 Water Absorption Test

By: PRI Construction Materials Technologies

Report No.: NCF-021-02-01, Dated: 9/17/07, Revised: 8/17/10

- ASTM D2126 – Dimensional Stability Test

By: Exova Canada, Inc.

Report No.: 10-06-M0068, Date: 5/19/10

- ASTM E96 Water Vapor Permeability Test

By: PRI Construction Materials Technologies

Report No.: NCF-021-02-01, Dated: 9/17/07, Revised: 8/17/10

- ASTM D1621 Compressive Strength Test

By: PRI Construction Materials Technologies

Report No.: NCF-021-02-01, Dated: 9/17/07, Revised: 8/17/10

- ASTM D1623 Tensile Strength Test

By: PRI Construction Materials Technologies

Report No.: NCF-021-02-01, Dated: 9/17/07, Revised: 8/17/10

- ASTM C273 Shear Strength Test

By: Certified Testing Laboratories

Report No.: CTLA2066W-2, Dated: 11/11/11

- ASTM D6226 Open Cell Content Test

By: Exova Canada, Inc.

Report No.: 09-012-13353-1, Date: 10/22/09

- ASTM E84 Flame Spread Index & Smoke Developed Index Tests

By: QAI Laboratories, Inc.

Report No.: RJ1744-1, Dated: 2/3/12

- ASTM D1929 Self-Ignition Temperature Test

By: PRI Construction Materials Technologies

Report No.: NCF-033-02-01, Dated: 10/14/11

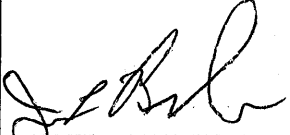

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8/6/12NCFI InsulStar® Spray Polyurethane Foam Adhesive
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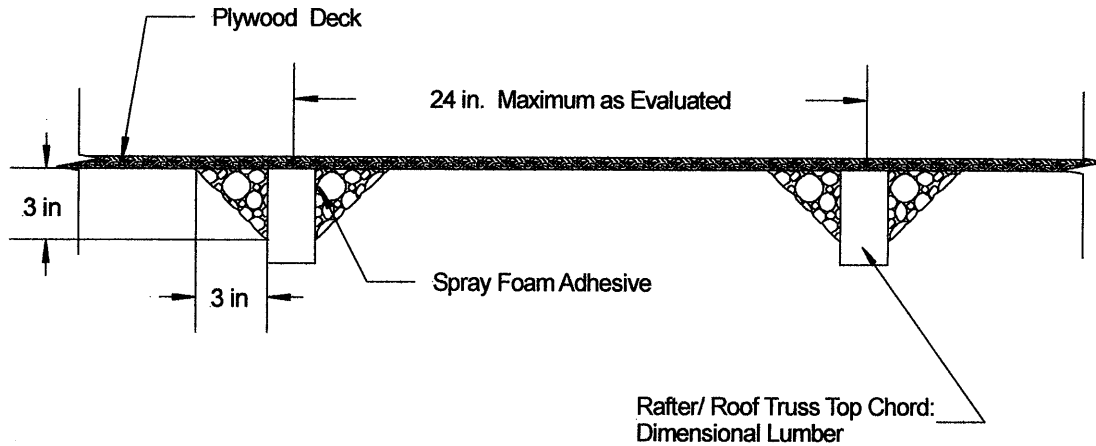
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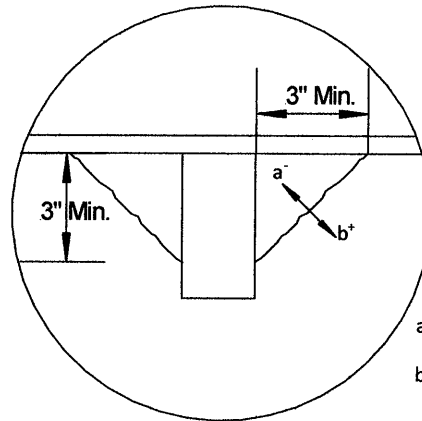
REVISIONS:

Installation Method NCFI Polyurethanes InsulStar® Spray Polyurethane Foam Adhesive

Application Type: Fillet



Typical Roof Deck Section



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By [Signature]

a⁻ Direction: Zero Tolerance

b⁺ Direction: Any Greater

Fillet Tolerances

[Signature]
JAMES L. BUCKNER, P.E., SECB
FLORIDA P.E. #31242
8/6/12

NCFI InsulStar® Spray Polyurethane Foam Adhesive
ENGINEERING REPORT

CBUCK Engineering
COA #8064
CBUCK, Inc.
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